

Rabbit Anti-Human IL1B / IL1F2 Monoclonal Antibody

Cat. No. CAB11564RH Lot. No. (See product label)

SPECIFICATION

Product Overview	Rabbit Monoclonal Antibody to Human IL1B / IL1F2
Species	Human
Source	Rabbit
Antigen Description	Interleukin 1 (IL-1) is a family of polypeptide cytokines consisting of two agonists, IL-1α (IL-1F1) and IL-1β (IL-1F2) encoded by two distinct genes and perform identical biological functions. IL1α and IL1β binds directly to a high-affinity receptor complex of IL1 RI and IL1 R AcP to initiate the signal transduction. IL1RII also binds to IL1β with high affinity, but on contrast, IL1β activity is inhibited since IL1RII exists as a decoy receptor and negative regulator. IL1R antagonist (IL1RA), also a member of IL-1 family, is identified to interact with IL1R1, preventing IL1α and IL1β to exert actions. IL1β is produced by a variety of cell types, and capable of stimulating thymocyte proliferation by inducing IL-2 release, B-cell maturation and proliferation, and fibroblast growth factor activity. Also identified as endogenous pyrogens, IL-1 are involved in the immune and inflammatory responses, and are reported to stimulate the release of prostaglandin and collagenase. IL1β is encoded as a inactive precursor of 269 amino acids with a 116 aa propeptide which is cleaved intracellularly by the cysteine protease, IL1β converting enzyme (Caspase1/ICE) to generate the biologically active cytokine. Lacking of a specific hydrophobic segment suggests that IL-1 is released by damaged cells or is secreted by a mechanism differing from that used for other secretory proteins.

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Specificity	Human IL-1 beta / IL1B. No cross-reactivity in WB and ELISA with Human IL1A/ IL1F1, Human IL1R2 / IL1RB, Human cell lysate (293 cell line)
Immunogen	Recombinant human ILb protein
Isotype	Rabbit IgG
Cross Reactivity	012
Clone	A013
Applications	WB; ELISA
Dilution	Western blot: This antibody can be used at 1 - 2 µg/mL with the appropriate secondary reagents to detect human IL1b in WB. Using a DAB detection system, the detection limit for human IL1b is approximately 0.5 ng/lane under non-reducing conditions and reducing conditions Direct ELISA: This antibody can be used at 0.1 - 0.2 µg/mL with the appropriate secondary reagents to detect human IL1b. The detection limit for human IL1b is approximately 0.0049 ng/well
Preparation	This antibody was obtained from a rabbit immunized with purified, human cell-derived, recombinant Mouse IL18R1 (rM IL18R1; NP_032391.1; Met 1 - Gly 326)
Format	0.2 µm filtered solution in PBS with 5% trehalose
Storage	This antibody can be stored at 2-8 °C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20 to -70 °C. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

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GENE INFORMATION

Gene Name	IL1B interleukin 1, beta [Homo sapiens]
Official Symbol	IL1B
Synonyms	IL1B; interleukin 1, beta; interleukin-1 beta; IL 1B; IL1 BETA; IL1F2; IL-1 beta; catabolin; preinterleukin 1 beta; pro-interleukin-1-beta; IL-1; IL1-BETA;
Gene ID	3553
mRNA Refseq	NM_000576
Protein Refseq	NP_000567
MIM	147720
UniProt ID	P01584
Chromosome Location	2q14
Pathway	African trypanosomiasis, organism-specific biosystem; African trypanosomiasis, conserved biosystem; Alzheimers disease, organism-specific biosystem; Alzheimers disease, conserved biosystem; Amoebiasis, organism-specific biosystem; Amoebiasis, conserved biosystem; Apoptosis, organism-specific biosystem;
Function	cytokine activity; cytokine activity; growth factor activity; interleukin-1 receptor binding; protein domain specific binding;

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